

**Amendments to the Claims:**

This listing of claims will replace all versions and listings of claims in the application:

**Listing of Claims:**

1. (currently amended) An indirect heating system in which a solid fuel circulates in the form of particles, comprising:

    a grinding station that grinds the solid fuel into particles;

    a separator that intercepts coarser particles to provide ~~finer~~fine particles and ~~finest~~finest particles;

    at least one cyclone that intercepts ~~the~~the fine particles from the ~~finer~~finest particles to provide finest particles;

    an intermediate silo that receives the fine particles for burning in a combustion chamber; and

    a dust extractor that intercepts the finest particles which are then provided by a dedicated pipe to a dedicated burner for burning in the combustion chamber.

2. (previously presented) The heating system according to claim 1, wherein the dedicated burner is near a main burner.

3. (previously presented) The heating system according to claim 2, wherein the finest particles are provided by a plurality of dedicated pipes to respective dedicated burners, each of the dedicated burners being near a respective main burner.

4. (currently amended) An indirect heating system in which a solid fuel circulates in the form of particles, comprising:

    a grinding station that grinds the solid fuel into particles;

    a separator that intercepts coarser particles to provide ~~finer~~fine particles and ~~finest~~finest particles;

    at least one cyclone that intercepts ~~the~~the fine particles from the ~~finer~~finest particles to provide finest particles;

    an intermediate silo that receives the fine particles for burning in a combustion chamber; and

a dust extractor that intercepts the finest particles which are then provided by a dedicated pipe to a dedicated injector to introduce the finest particles into the combustion chamber.

5. (previously presented) The heating system according to claim 4, wherein the finest particles are injected under substoichiometric conditions.

6. (previously presented) The heating system according to claim 1, wherein the intercepted particles have a diameter less than 75 microns.

7. (currently amended) The heating system according to claim 1, wherein the intercepted particles have a true mass per unit volume from  $0.1 \text{ kg/dm}^3$  to  $0.4 \text{ kg/dm}^3$  lower than that of the particles intercepted by the cyclone.

8. (canceled))

9. (previously presented) The heating system according to claim 1, wherein the combustion chamber is a double vault combustion chamber, a front heating combustion chamber, or tangential heating combustion chamber.

10. (canceled)

11. (canceled)

12. (previously presented) The heating system according to claim 1, wherein the solid fuel is non-bituminous coal.

13. (previous presented) The heating system according to claim 1, further including a dedicated intermediate silo that receives the finest particles from the dust extractor.

14. (previously presented) The heating system according to claim 1, wherein the fine particles are provided to a main burner for burning in the combustion chamber.

15. (previously presented) The heating system according to claim 1, further including a feeder that meters the quantity of the finest material to the dedicated burner.
16. (previously presented) The heating system according to claim 1, wherein the dust extractor includes a bag filter or an electrostatic dust extractor.
- 17 (previously presented) The heating system according to claim 1, wherein the finest particles is mixed with a hot gas.
18. (previously presented) The heating system according to claim 1, wherein some of the finest particles are provided by a second dedicated pipe to a dedicated injector that introduces the finest particles into the combustion chamber.
19. (previously presented) The heating system according to claim 18, wherein the finest particles provided to the dedicated injector to introduce the finest particles into the combustion chamber near the main burners.
20. (previously presented) The heating system according to claim 1, wherein the finest particles have a higher content of combustible material than the fine particles.
21. (previously presented) The heating system according to claim 4, wherein the dedicated injector is disposed near a main burner.
22. (previously presented) The heating system according to claim 4, wherein the dedicated injector introduces the finest particles downstream of a main burner.
23. (new) An indirect heating system in which a solid fuel circulates in the form of particles, comprising:
  - a grinding station that grinds the solid fuel into particles;
  - a separator that intercepts coarser particles to provide fine particles and finest particles;
  - at least one cyclone that intercepts the fine particles from the finest particles to provide the finest particles;

a first intermediate silo that receives the fine particles for burning in a combustion chamber;

a dust extractor that intercepts the finest particles which are then provided by a dedicated pipe to a dedicated burner for burning in the combustion chamber;

a second intermediate silo that receives the finest particles from the dust extractor, wherein the finest particles are then provided by a dedicated pipe to a dedicated burner for burning in the combustion chamber; and

a feeder that controls the amount of finest particles provided from the second intermediate silo to the dedicated burner.